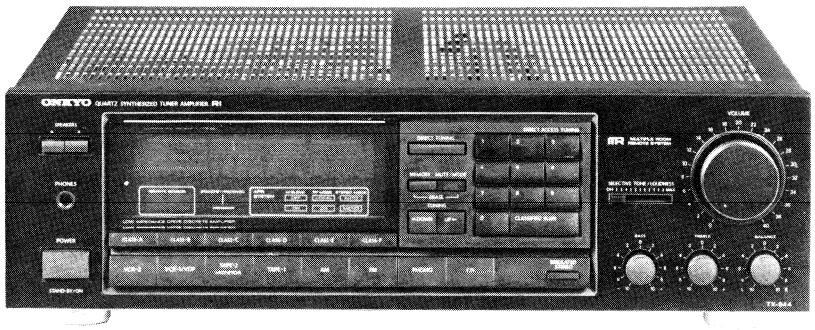
Ref. No. 0M3366

ONKYO SERVICE MANUAL

QUARTZ SYNTHESIZED TUNER AMPLIFIER

MODEL TX-844



Black model

BHUD, BHUDN, BHUDC	120V AC, 60Hz
BHUG	220V AC, 50Hz
BHUW	120/220V AC, 50/60Hz
BHUQA, BHUQB	240V AC, 50Hz

ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

AMPLIFIER SECTION	–220V/Worldwide models–	–120V model–
Power output:	60 watts per channel, min, RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.04% total harmonic distortion.	60 watts per channel, min, RMS, at 8 ohms both channels driven, from 20Hz to 20kHz, with no more than 0.04% total harmonic distortion.
Musical Power Output:	2×160 watts at 4 ohms, 1kHz (DIN) 2×100 watts at 8 ohms, 1kHz (DIN)	
Continuous Power Output:	2× 90 watts at 4 ohms, 1kHz (DIN) 2×70 watts at 8 ohms, 1kHz (DIN)	
Total Harmonic Distortion:	0.08% at rated power 0.08% at 1 watts output	0.08% at rated power
IM Distortion:	0.08% at rated power 0.08% at 1 watts output	0.08% at rated power
Damping Factor:	60 at 8 ohms	60 at 8 ohms
Frequency Response:	20–30,000Hz ±1dB	20–30,000Hz ±1dB
RIAA Diviation:	20–20,000Hz ±0.8dB	20–20,000Hz ±0.8dB
Sensitivity and Impedance:	Phono: 2.5mV/50 kohms CD: 150mV/50 kohms Tape Play: 150mV/50 kohms Tape Rec: 150mV/3.5 kohms	Phono: 2.5mV/50 kohms CD: 150mV/50 kohms Tape Play: 150mV/50 kohms Tape Rec: 150mV/3.5 kohms
Phono Overload (MM):	120mV RMS at 1kHz, 0.08% THD.	120mV RMS at 1kHz, 0.08% THD.
Signal-to-Noise Ratio:	Phono: 80dB (at 5mV input, IHF-A) CD/Tape: 102dB (IHF A)	Phono: 80dB (at 5mV input, IHF-A) CD/Tape: 100dB (IHF A)
Tone controls:	Bass: ±10dB at 100Hz Treble: ±10dB at 10kHz	Bass: ±10dB at 100Hz Treble: ±10dB at 10kHz
Muting	–∞	–∞

TUNER SECTION				
FM:				
Tuning Range:	87.50–108.00MHz (50kHz steps) 87.50–108.00MHz (50kHz steps) or 87.9–107.9kHz (200kHz steps) (Worldwide model)		87.9–107.9MHz (200kHz steps)	
Usable Sensitivity:	Mono:	12.8dBf, 1.2μV, 75 ohms 1.0μV (S/N 26dB, 40kHz Devi.) 75ohms DIN	Mono:	11.2dBf, 2.0μV
	Stereo:	18.0dBf, 2.2μV, 75ohms 23μV (S/N 46dB, 40kHz Devi.) 75ohms DIN	Stereo:	17.2dBf, 4.0μV
50dB Quieting Sensitivity:	Mono:	18.0dBf, 2.2μV, 75ohms	Mono:	17.2dBf, 4.0μV
	Stereo:	37.2dBf, 20μV, 75ohms	Stereo:	37.2dBf, 40μV
Capture Ratio:	1.5dB		1.5dB	
Image Rejection Ratio:	85dB		40dB	
IF Rejection Ratio:	90dB		90dB	
Signal-to-Noise Ratio:	Mono:	73dB	Mono:	72dB
	Stereo:	67dB	Stereo:	66dB
Alternate Channel Attenuation:			55dB	
Selectivity:	50dB DIN (±300kHz, 40kHz, dev.)			
AM suppression Ratio:	50dB		50dB	
Harmonic Distortion:	Mono:	0.15%	Mono:	0.15%
	Stereo:	0.30%	Stereo:	0.30%
Frequency Response:	30–15,000Hz ±1.5dB		30–15,000Hz ±1.5dB	
Stereo Separation:	45dB at 1kHz 30dB at 100–10,000Hz		45dB at 1kHz 30dB at 100–10,000Hz	
Muting Level:	17.2dBf, 4.0μV		17.2dBf, 4.0μV	
AM:				
Tuning Range:	522–1611kHz (9kHz steps) 531–1602kHz (9kHz steps) Saudi Arabia & Worldwide model		530–1710kHz (10kHz steps)	
Usable Sensitivity:	30μV		30μV	
Image Rejection Ratio:	40dB		40dB	
IF Rejection Ratio:	40dB		40dB	
Signal-to-Noise Ratio:	40dB		40dB	
Harmonic Distortion:	0.7%		0.7%	

GENERAL	
Dimensions (W×H×D):	435×137×350mm 17-1/8″×5-3/8″×13-3/4″
Weight:	9.0kg., 19.8 lbs.

Specifications and features are subject to change without notice.

SERVICE PROCEDURES

1. Replacing the fuses

For continued protection against fire hazard, replace only with same type and same rating fuse.

D (120V) model

Circuit no.	Part no.	Description
F901	252050	5A (ST-6), Primary

G (220V) and Q (240V) models

Circuit no.	Part no.	Description
F902	252075	2.5A-SE-EAK, Primary
F903	252075	2.5A-SE-EAK, AC outlet (Only 220V model)

W (Worldwide) model

Circuit no.	Part no.	Description
F901	252050	5A (ST-6), Primary
F902	252075	2.5A-SE-EAK, Primary

2. Change of FM/AM band step.

With the exception of the models below, a BAND STEP selector switch is not provided.

(FM)

MODEL	BAND STEP	D761
UD	200kHz→50kHz	Additional
UG/UQ	50kHz→200kHz	Eliminated

(AM)

BAND STEP	D717
10kHz→ 9kHz	Eliminated
9kHz→10kHz	Additional

In D761 and D717 1SS133 (Part No. 223163) are used.

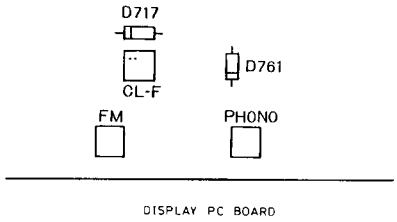
– Worldwide model –

Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 50kHz (FM) and 9kHz (AM) at the factory, but may have to be reset to 200kHz and 10kHz depending on the area where the unit is used.

	De-emphasis	FM step	AM step
Europe:	50 μsec	50kHz	9kHz
U.S.A.:	75 μsec	200kHz	10kHz

3. Memory preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory the power switch must be turned on and off a few times each month to keep the back-up system operative. The period of time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the unit is exposed to very high humidity or used in an area with an extremely humid climate.



4. Safety-check out

(Only U.S.A. model)

After correcting the original service problem perform the following safety check before releasing the set to the customer.

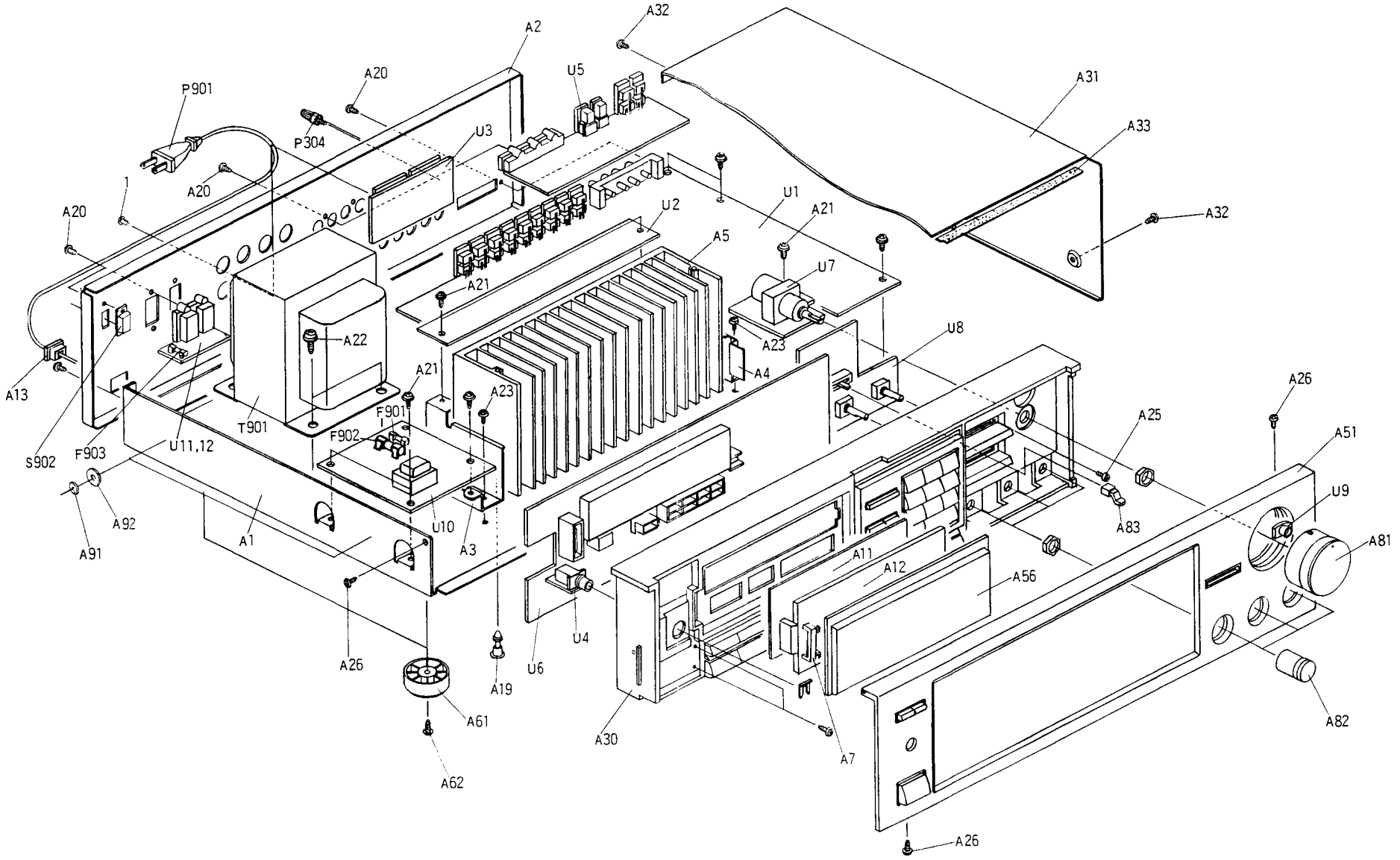
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel. Specifications: 3.3 Mohm ±10% at 500V.

5. Change of voltage

Worldwide models are equipped with a voltage selector to conform with local power supplies. This switch is located on the back panel. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by sliding the groove in the switch with the screw-driver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.

EXPLODED VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
A1	27100163-2	Chassis
A2	27121348A	Back panel <D>
	27121348-1A	Back panel <G>
	27121348-3A	Back panel <W>
	27121348-4	Back panel <Q>
A3	27141391	Bracket LH
A4	27141392	Bracket RH
A5	27160258	Radiator
A7	27190644	Holder, dial plate
A11	28133244-1	Back plate
A12	28130260-1	Dial plate
A13	27300750	⚠ Strainrelief
A19	27190524	KGLS-14R, Holder
A20	834430088	3TTS+8B(BC), Self-tapping screw
A21	831130088	3TTW+8B, Self-tapping screw
A22	830440089	4TTC+8C(BC), Self-tapping screw
A23	834430108	3TTS+10B(BC), Self-tapping screw
A25	82142004	2P+4F(BC), Pan head screw
A26	833430080	3TTP+8P(BC), Self-tapping screw
A27	801433	3SMS10WSW+14B, Sems tapping screw
A30	27110564A	Front bracket ass'y
A31	28184394	Top cover
A32	834430088	3TTS+8B(BC), Self-tapping screw
A33	28140024	0.5t×10×390, Cushion
A51	1A217121	Front panel ass'y
A56	28191561A	Clear plate
A61	27175153-1	Leg
A62	834430088	3TTS+8B(BC), Self-tapping screw
A81	28323365C	Knob VOLUME
A82	28324034	Knob BALANCE
A83	28322925	Knob SLIDE
A91	870048	3×8×t0.8, Washer, nylon <G/W/Q>
A92	27270212	Spacer <G/W/Q>
F901	252050	⚠ 5A(ST-6), Primary fuse <D/W>
F902	252075	⚠ 2.5A-SE-EAK, Primary fuse <G/W/Q>
F903	252075	⚠ 2.5A-SE-EAK, AC outlet fuse <G>
P304	25060044	⚠ 14×3mm, Terminal GROUND
P901	253123, 253136, 253140 or 253146	⚠ AS-UC-6 #18, Power supply cord <D>
	253149 or 253151	⚠ AS-CEE, Power supply cord <G/W>
	253118	⚠ AS-SAA, Power supply cord <Q>

REF. NO.	PART NO.	DESCRIPTION
P902, P903	25050346	⚠ NSCT-2P173, AC outlet terminal <Q>
Q521, Q522	2201703, 2201704, 2201706, 2202292 or 2202293	2SC3855-O, 2SC3855-Y, 2SC3855-P, 2SC3182N-R or 2SC3182N-O, Power amplifier transistors
Q523, Q524	2201693, 2201694, 2201696, 2202282 or 2202283	2SA1492-O, 2SA1492-Y, 2SA1492-P, 2SA1265N-R or 2SA1265N-O, Power amplifier transistors
S902	25065287	⚠ NSS-22113P, Voltage selector switch <W>
T901	2300531	⚠ NPT-1068D, Power transformer <D>
	2300532	⚠ NPT-1068G, Power transformer <G>
	2300533	⚠ NPT-1068DG, Power transformer <W>
	2300534	⚠ NPT-1068Q, Power transformer <Q>
U1	1A217569-2	NAAR-3869-2, FM/AM tuner and selector circuit pc board ass'y <D>
	1A217569-2A	NAAR-3869-2A, FM/AM tuner and selector circuit pc board ass'y <G/Q>
	1A217569-2B	NAAR-3869-2B, FM/AM tuner and selector circuit pc board ass'y <W>
U2	1A217570-2	NAAF-3870-2, Power amplifier pc board ass'y <D/W>
	1A217570-2A	NAAF-3870-2A, Power amplifier pc board ass'y <G/Q>
U3	1A217571-2	NAETC-3871-2, Speaker terminal pc board ass'y <D>
	1A217571-2A	NAETC-3871-2A, Speaker terminal pc board ass'y <G/W/Q>
U4	1A217572-2	NAETC-3872-2, Headphone terminal pc board ass'y <D/W>
	1A217572-2A	NAETC-3872-2A, Headphone terminal pc board ass'y <G/Q>
U5	1A217573-2	NAETC-3873-2, Video terminal pc board ass'y <D>
	1A217573-2A	NAETC-3873-2A, Video terminal pc board ass'y <G/W/Q>

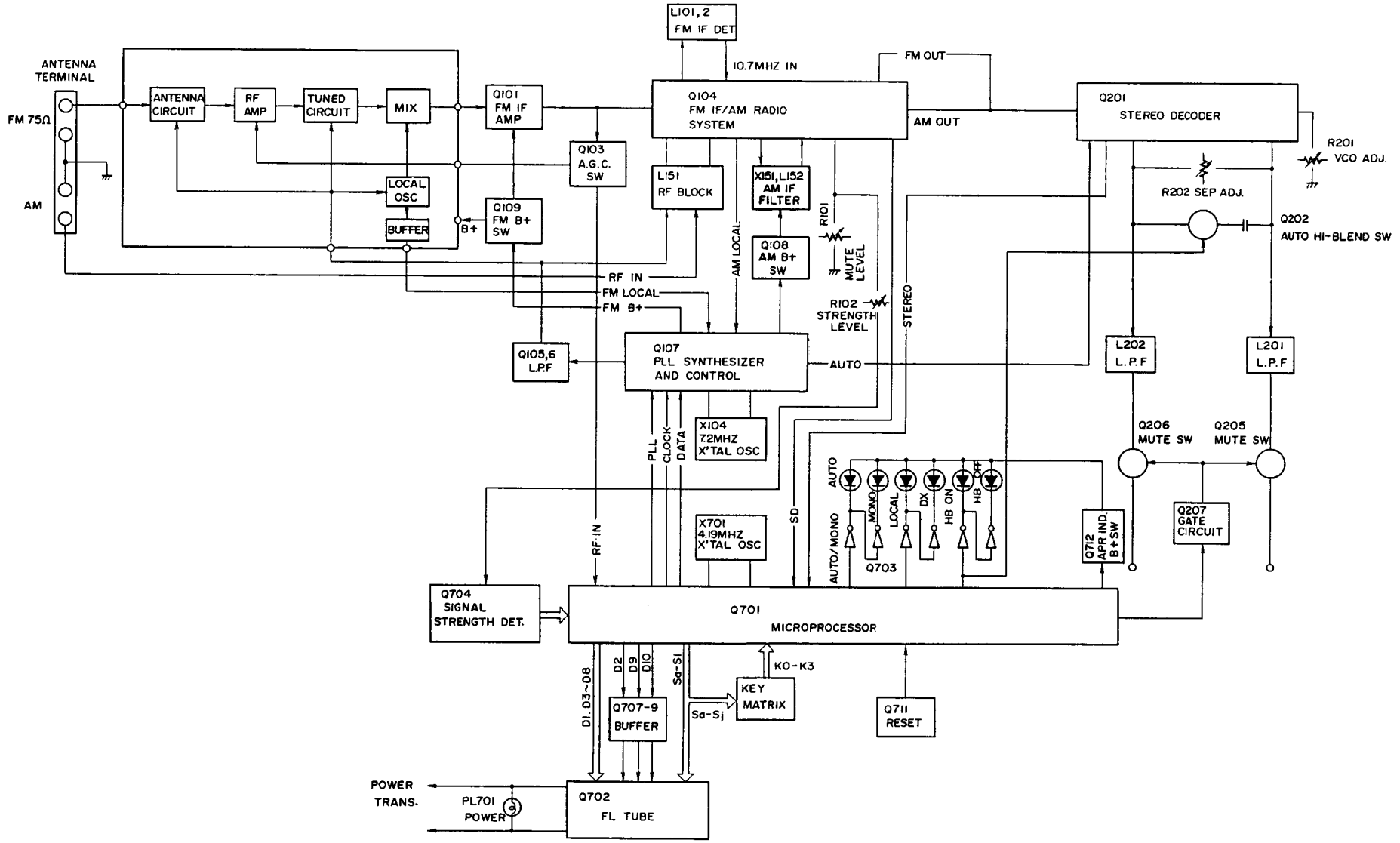
REF. NO.	PART NO.	DESCRIPTION
U6	1A217574-2	NADIS-3874-2, Display pc board ass'y <D>
	1A217574-2A	NADIS-3874-2A, Display pc board ass'y <G/Q>
	1A217574-2B	NADIS-3874-2B, Display pc board ass'y <W>
U7	1A217575-2	NAAF-3875-2, Volume pc board ass'y <D>
	1A217575-2A	NAAF-3875-2A, Volume pc board ass'y <G/W/Q>
U8	1A217576-2	NAAF-3876-2, Preamplifier pc board ass'y <D>
	1A217576-2A	NAAF-3876-2A, Preamplifier pc board ass'y <G/W/Q>
U9	1A217577-2	NADIS-3877-2, Volume indicator pc board ass'y
U10	1A217578-2	NAPS-3878-2, Power supply circuit pc board ass'y <D>
	1A217578-2A	NAPS-3878-2A, Power supply circuit pc board ass'y <G>
	1A217578-2B	NAPS-3878-2B, Power supply circuit pc board ass'y <W>
	1A217578-2C	NAPS-3878-2C, Power supply circuit pc board ass'y <Q>
U11	1A217579-2	NAETC-3879-2, AC outlet terminal pc board ass'y <D>
U12	1A217580-2	NAETC-3880-2, AC outlet terminal pc board ass'y <G>
	1A217580-2A	NAETC-3880-2A, AC outlet terminal pc board ass'y <W>

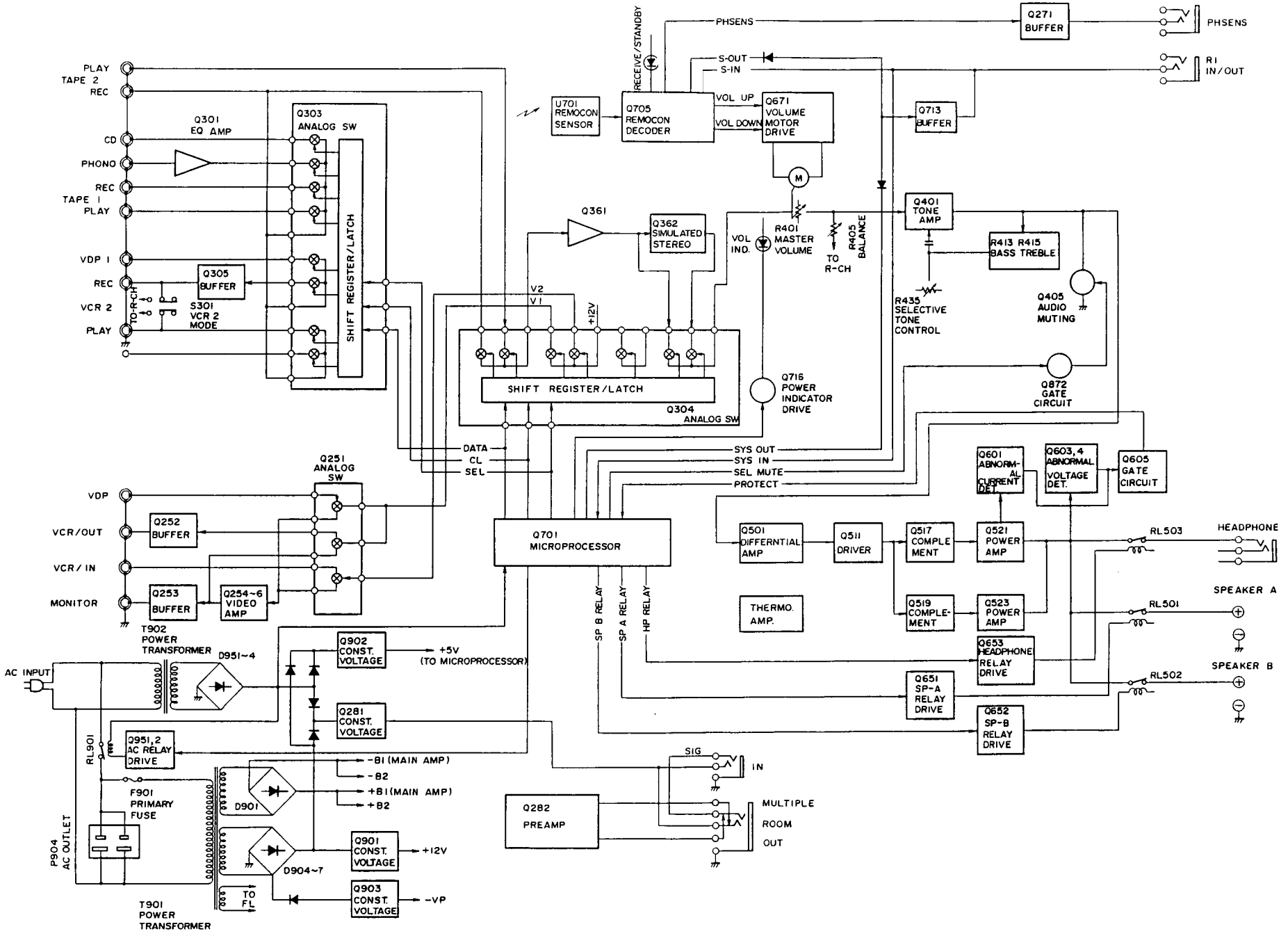
NOTE: <D>: Only 120V model
<G>: Only 220V model
<W>: Only Worldwide model
<Q>: Only 240V model

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBERS SPECIFIED.

BLOCK DIAGRAM

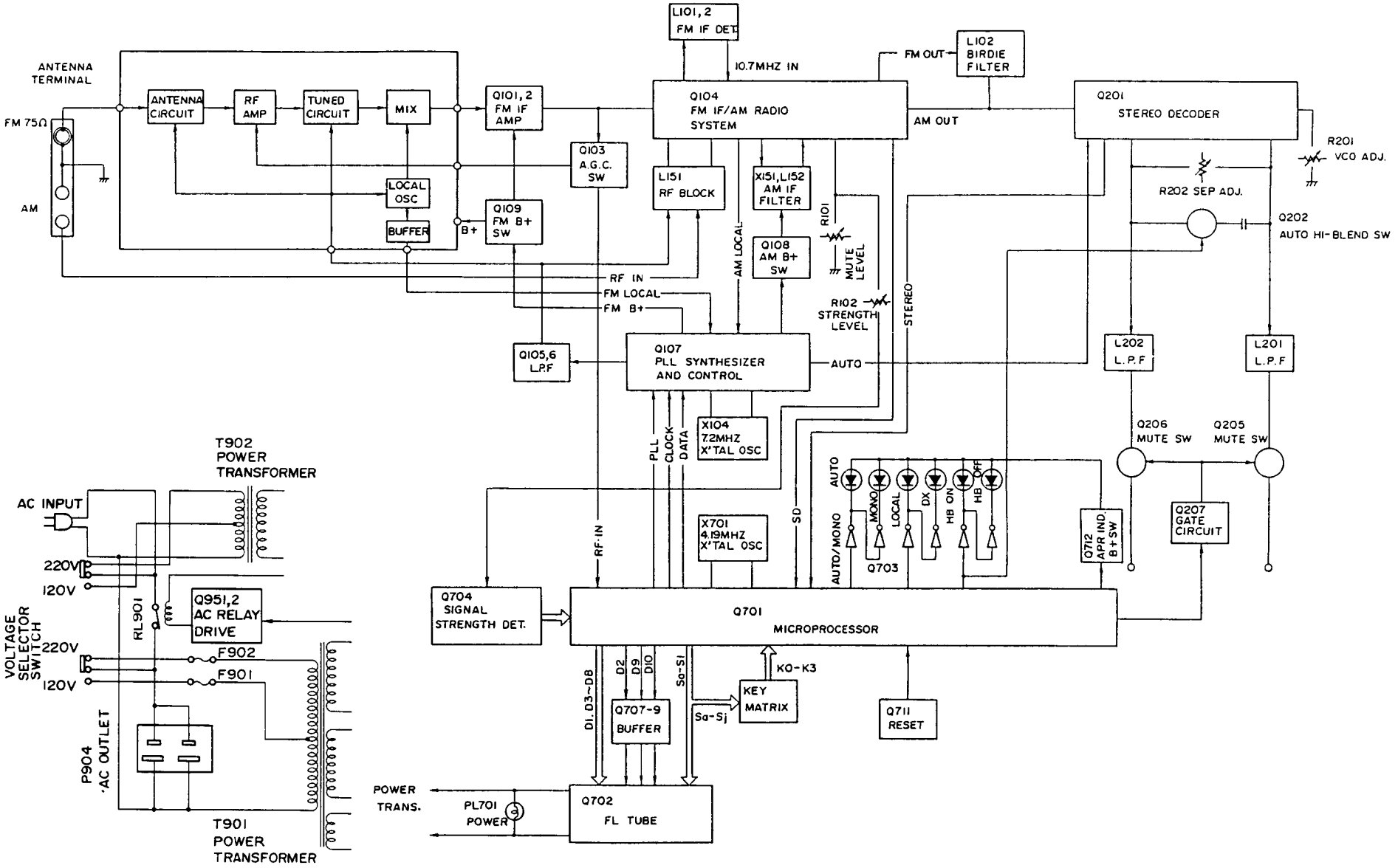
— 120V MODEL —



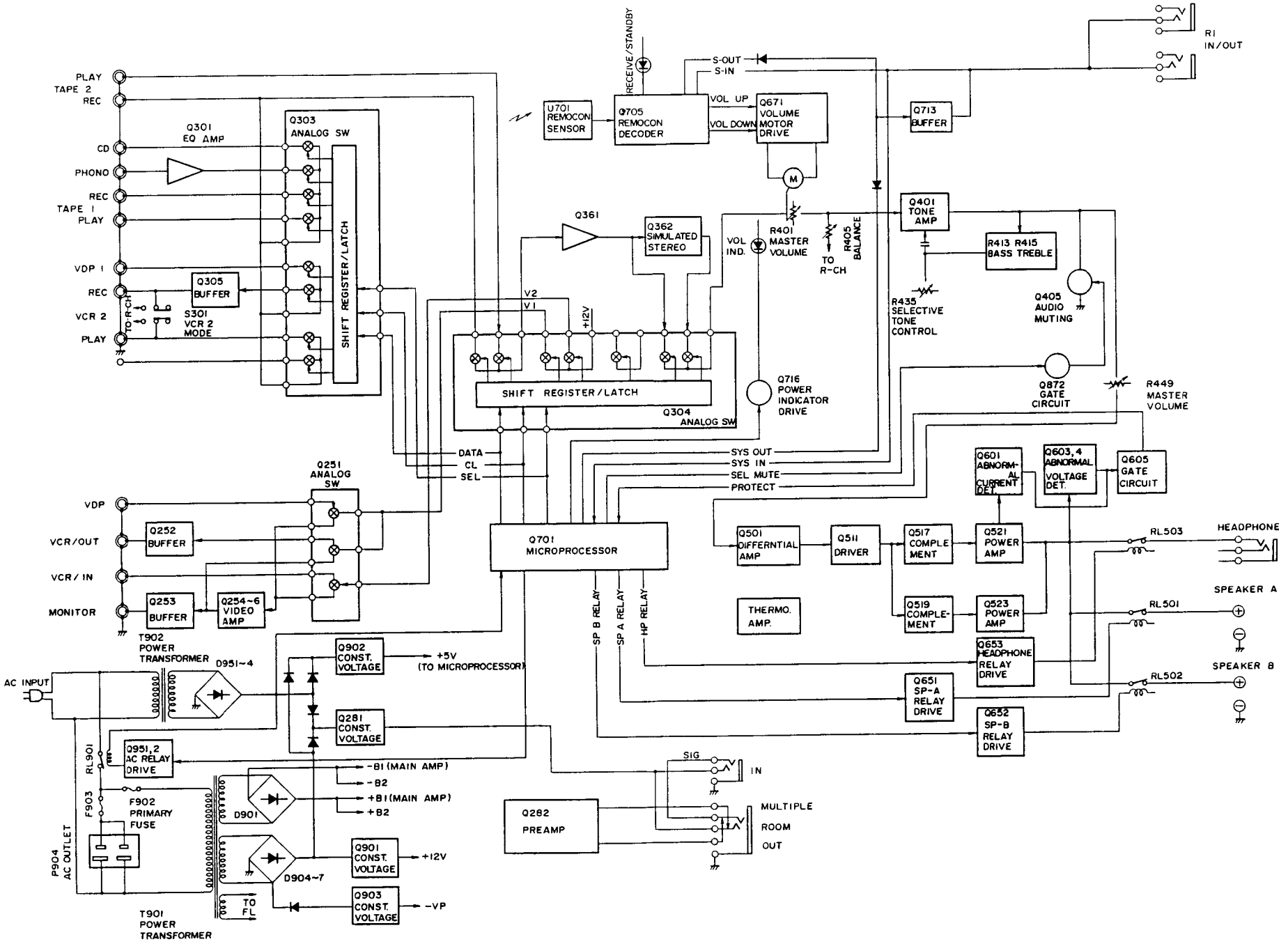

PLAY
TAPE 2 REC
CD
PHONO
TAPE 1 REC
PLAY
VDP 1
REC
VCR 2
PLAY
TO R-CH
Q305 BUFFER
S301 VCR 2 MODE
Q301 EQ AMP
Q303 ANALOG SW
SHIFT REGISTER/LATCH
Q361
Q362 SIMULATED STEREO
V2
V1
+12V
SHIFT REGISTER/LATCH
Q304 ANALOG SW
DATA
CL
SEL
Q716 POWER INDICATOR DRIVE
VOL IND.
R401 MASTER VOLUME
R405 BALANCE
TO R-CH
R435 SELECTIVE TONE CONTROL
Q401 TONE AMP
R413 R415 BASS TREBLE
Q405 AUDIO MUTING
Q872 GATE CIRCUIT
RECEIVE/STANDBY
U701 REMOCON SENSOR
Q705 REMOCON DECODER
VOL UP
VOL DOWN
Q671 VOLUME MOTOR DRIVE
M
PHSENS
Q271 BUFFER
PHSENS
S-OUT
S-IN
Q713 BUFFER
RI IN/OUT
SYS OUT
SYS IN
SEL MUTE
PROTECT
Q601 ABNORMAL CURRENT DET.
Q603,4 ABNORMAL VOLTAGE DET.
Q605 GATE CIRCUIT
Q251 ANALOG SW
VDP
VCR/OUT
VCR/IN
MONITOR
Q252 BUFFER
Q253 BUFFER
Q254~6 VIDEO AMP
Q701 MICROPROCESSOR
Q501 DIFFERNTIAL AMP
Q511 DRIVER
Q517 COMPLEMENT
Q521 POWER AMP
Q519 COMPLEMENT
Q523 POWER AMP
THERMO. AMP.
RL503
HEADPHONE
SPEAKER A
RL501
SPEAKER B
RL502
SP B RELAY
SP A RELAY
HP RELAY
Q653 HEADPHONE RELAY DRIVE
Q651 SP-A RELAY DRIVE
Q652 SP-B RELAY DRIVE
T902 POWER TRANSFORMER
D951~4
AC INPUT
Q902 CONST. VOLTAGE
+5V (TO MICROPROCESSOR)
Q281 CONST. VOLTAGE
Q951,2 AC RELAY DRIVE
RL901
F901 PRIMARY FUSE
P904 AC OUTLET
-B1 (MAIN AMP)
-B2
+B1 (MAIN AMP)
+B2
D901
Q901 CONST. VOLTAGE
+12V
D904~7
Q903 CONST. VOLTAGE
-VP
TO FL
T901 POWER TRANSFORMER
SIG
IN
Q282 PREAMP
MULTIPLE ROOM OUT

BLOCK DIAGRAM

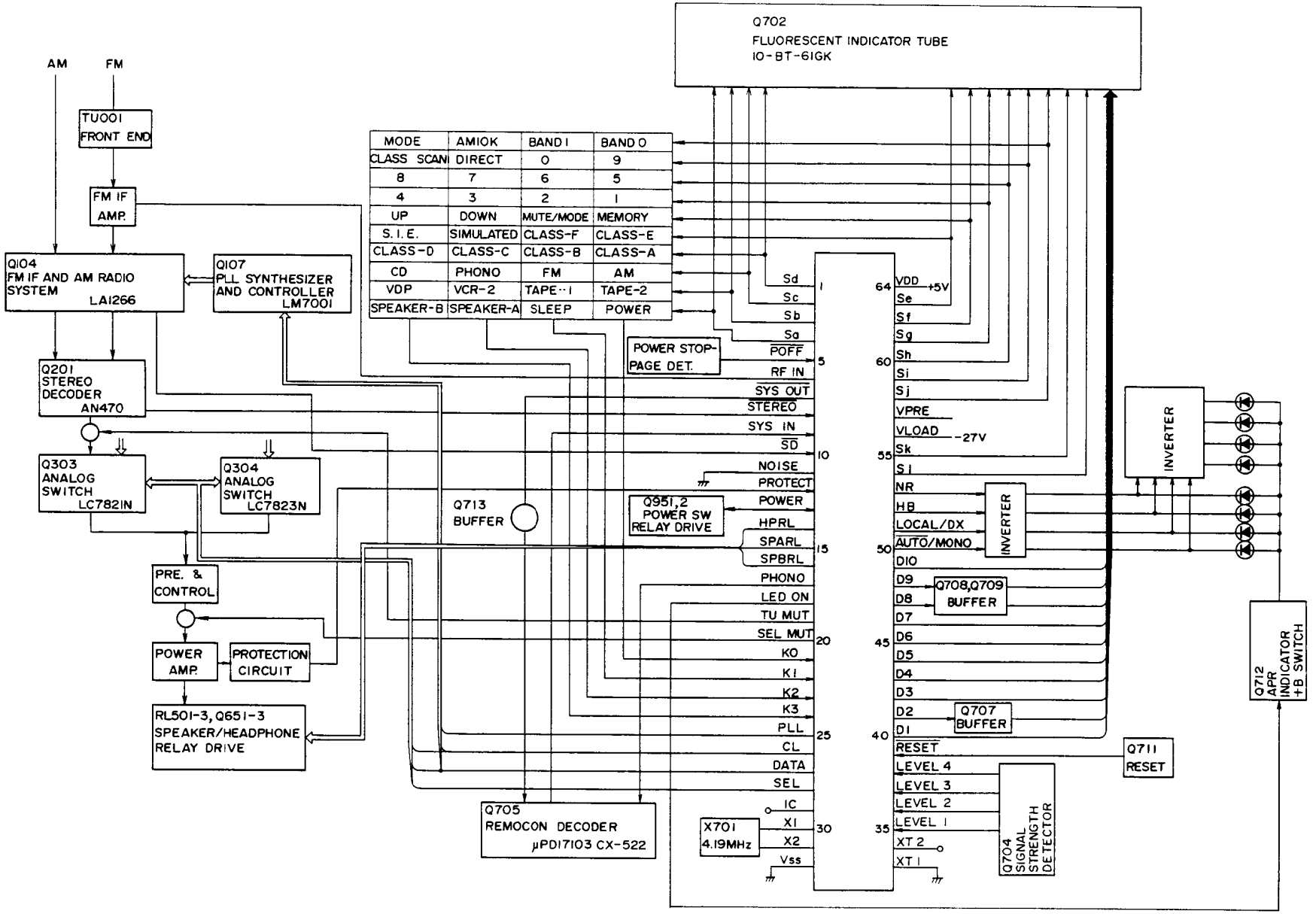
— OTHER MODELS —



Worldwide model


PLAY
TAPE 2
REC
CD
PHONO
REC
TAPE 1
PLAY
VDP 1
REC
VCR 2
PLAY
TO R-CH
Q301
EQ AMP
Q303
ANALOG SW
SHIFT REGISTER/LATCH
Q305
BUFFER
S301
VCR 2
MODE
U701
REMOCON
SENSOR
RECEIVE/STANDBY
Q705
REMOCON
DECODER
VOL UP
VOL DOWN
Q671
VOLUME
MOTOR
DRIVE
S-OUT
S-IN
RI
IN/OUT
Q713
BUFFER
Q361
Q362
SIMULATED
STEREO
VOL
IND.
R401
MASTER
VOLUME
TO
R-CH
R405
BALANCE
Q401
TONE
AMP
R413 R415
BASS TREBLE
R435
SELECTIVE
TONE
CONTROL
Q405
AUDIO
MUTING
V2
V1
+12V
SHIFT REGISTER/LATCH
Q304
ANALOG SW
Q716
POWER
INDICATOR
DRIVE
Q872
GATE
CIRCUIT
R449
MASTER
VOLUME
DATA
CL
SEL
SYS OUT
SYS IN
SEL MUTE
PROTECT
Q251
ANALOG
SW
VDP
VCR/OUT
VCR/IN
MONITOR
Q252
BUFFER
Q253
BUFFER
Q254~6
VIDEO
AMP
Q701
MICROPROCESSOR
Q501
DIFFERNTIAL
AMP
Q511
DRIVER
Q517
COMPLE
MENT
Q521
POWER
AMP
Q519
COMPLE-
MENT
Q523
POWER
AMP
THERMO.
AMP.
Q601
ABNORM-
AL
CURRENT
DET.
Q603, 4
ABNORMAL
VOLTAGE
DET.
Q605
GATE
CIRCUIT
RL503
HEADPHONE
SPEAKER A
RL501
SPEAKER B
RL502
SP B RELAY
SP A RELAY
HP RELAY
Q653
HEADPHONE
RELAY
DRIVE
Q651
SP-A
RELAY
DRIVE
Q652
SP-B
RELAY
DRIVE
T902
POWER
TRANSFORMER
D951~4
Q902
CONST.
VOLTAGE
+5V
(TO MICROPROCESSOR)
Q281
CONST.
VOLTAGE
AC INPUT
Q951, 2
AC RELAY
DRIVE
RL901
F903
F902
PRIMARY
FUSE
P904
AC OUTLET
-B1 (MAIN AMP)
-B2
+B1 (MAIN AMP)
+B2
D901
D904~7
Q901
CONST.
VOLTAGE
+12V
Q903
CONST.
VOLTAGE
-VP
TO
FL
T901
POWER
TRANSFORMER
SIG
IN
MULTIPLE
ROOM
OUT
Q282
PREAMP

CONNECTION DIAGRAM OF MICROPROCESSOR



Q701 μPD75286CW-014 (MICROPROCESSOR)

<table>
<tr><th>Pin No.</th><th>Function</th><th>Description</th></tr>
<tr><td>1-4</td><td>Sd-Sa</td><td>Segment and key scan output terminals."H"when active.</td></tr>
<tr><td>5</td><td>$\overline{\text{POFF}}$</td><td>This is the input terminal for detection of the stoppage of electric current."L"when the stoppage of electric current.</td></tr>
<tr><td>6</td><td>RF IN</td><td>RF mode input terminal
Control the terminal LOCAL/DX as shown below.
<table>
<tr><th>RF IN</th><th>LOCAL/DX</th></tr>
<tr><td>L</td><td>L</td></tr>
<tr><td>H</td><td>H</td></tr>
</table></td></tr>
<tr><td>7</td><td>$\overline{\text{SYS OUT}}$
/SYS EN</td><td>System code output terminal."L"when active.
The initial setting input terminal when the power turns on.</td></tr>
<tr><td>8</td><td>$\overline{\text{STEREO}}$</td><td>Stereo broadcast detection input terminal."L"when stereo broadcast.
Control of STEREO indicator.</td></tr>
<tr><td>9</td><td>SYS IN</td><td>System code input terminal."H"when active.</td></tr>
<tr><td>10</td><td>$\overline{\text{SD}}$</td><td>Broadcast detection input terminal."L"when tuned.
Control the stop of the auto tuning and the output TU MUT.</td></tr>
<tr><td>11</td><td>NOISE</td><td>Noise detection input terminal. "H" when active.
Control the stop of the auto tuning.</td></tr>
<tr><td>12</td><td>PROTECT</td><td>Protect operation detection input terminal. "H"when active.</td></tr>
<tr><td>13</td><td>POWER</td><td>Relay control output terminal for power switch."H"when the power turns on.</td></tr>
<tr><td>14</td><td>HPRL</td><td>Relay control output terminal for headphone."H"when the relay turns on.</td></tr>
<tr><td>15</td><td>SPARL</td><td>Relay control output terminal for speaker A."H"when the relay turns on.</td></tr>
<tr><td>16</td><td>SPBRL</td><td>Relay control output terminal for speaker B."H"when the relay turns on.</td></tr>
<tr><td>17</td><td>PHONO</td><td>Phono control output terminal."L"when the selector switch is PHONO.</td></tr>
<tr><td>18</td><td>LED ON</td><td>APR indicator control output terminal. "L"when indicators light on.</td></tr>
<tr><td>19</td><td>TU MUT</td><td>Muting output terminal of tuner section. "H"when active.</td></tr>
<tr><td>20</td><td>SEL MUT</td><td>Muting output terminal when the selector switch operates."H"when active.</td></tr>
<tr><td>21-24</td><td>K0-K3</td><td>Key scan input terminals. "H"when active.</td></tr>
<tr><td>25</td><td>PLL</td><td>Output terminal to connect to the terminal CE of PLL IC(LM7001).</td></tr>
<tr><td>26</td><td>CL</td><td>Output terminal to connect to the terminal CL of function switches(LC7821N, LC7823N) and the terminal CL of PLL IC.</td></tr>
<tr><td>27</td><td>DATA</td><td>Output terminal to connect to the terminal DI of function switches(LC7821N, LC7823N) and the terminal DATA of PLL IC.</td></tr>
<tr><td>28</td><td>SEL</td><td>Output terminal to connect to the terminal CE of function switches.</td></tr>
<tr><td>29</td><td>IC</td><td>Internal connected</td></tr>
<tr><td>30</td><td>X1</td><td rowspan="2">Ceramic oscillator connection terminals for main system clock.
Connect to the 4.19MHz ceramic oscillator.</td></tr>
<tr><td>31</td><td>X2</td></tr>
<tr><td>32</td><td>GND</td><td>Ground terminal.</td></tr>
<tr><td>33</td><td>XT1</td><td>Crystal oscillator connection terminal for sub-system.</td></tr>
<tr><td>34</td><td>XT2</td><td>Not used.</td></tr>
<tr><td>35-38</td><td>LEVEL1-
LEVEL4</td><td>Signal strength level input terminal.
<table>
<tr><th></th><th></th><th colspan="4">Signal indicator</th><th colspan="2">Output</th></tr>
<tr><th></th><th>Input</th><th>1th</th><th>2nd</th><th>3th</th><th>4th</th><th>NR</th><th>HB</th></tr>
<tr><td>LEVEL 1</td><td>H</td><td>off</td><td>off</td><td>off</td><td>off</td><td>H</td><td>H</td></tr>
<tr><td>LEVEL 1</td><td>L</td><td>on</td><td>off</td><td>off</td><td>off</td><td>H</td><td>H</td></tr>
<tr><td>LEVEL 1/2</td><td>L</td><td>on</td><td>on</td><td>off</td><td>off</td><td>L</td><td>H</td></tr>
<tr><td>LEVEL 1-3</td><td>L</td><td>on</td><td>on</td><td>on</td><td>off</td><td>L</td><td>H</td></tr>
<tr><td>LEVEL 1-4</td><td>L</td><td>on</td><td>on</td><td>on</td><td>on</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>39</td><td>$\overline{\text{RESET}}$</td><td>Reset input terminal."L"when active.</td></tr>
<tr><td>40-49</td><td>D1-D10</td><td>Digit output terminals."H"when active.</td></tr>
</table>

50	$\overline{\text{AUTO}}$/MONO	AUTO/MONO indicator output terminal."L"when FM mode is AUTO and "H"when FM mode is MONO.
51	LOCAL/DX	LOCAL/DX indicator output terminal.Control according input RF IN when FM.
52	HB	Hi-blend control and indicator output terminal."H"when LEVEL4 is high and "L"when LEVEL4 is low.
53	NR	Noise reduction control and indicator output terminal."H"when LEVEL2 is high and "L"when LEVEL2 is low.
54,55	St,Sk	Segment output terminal."H"when active.
56	VLOAD	Pull down resistor connection terminal of FIP controller/driver.
57	VPRE	Power supply terminal for output buffer of FIP controller/driver.
58-63	Sj-Se	Segment and key scan signal output terminals."H"when active.
64	VDD	Power supply terminal.(+5V)

BAND1, BAND0 (FM band setting)

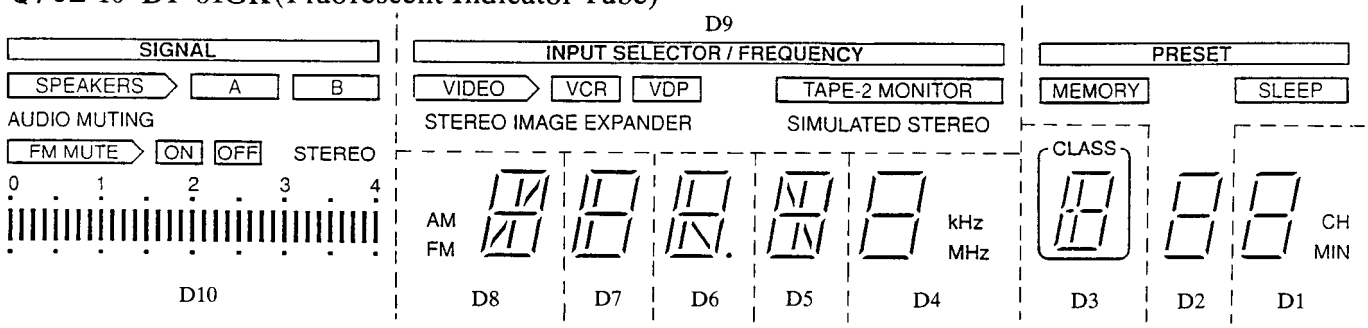
BAND1	BAND0	Region	Frequency range	Channel space	Reference frequency	IF frequency
0	1	Europer	87.50~108.00MHz	50kHz	25kHz	10.7MHz
0	0	U.S.A.	87.9 ~107.9 MHz	200kHz	25kHz	10.7MHz
1	X	Saudi Arabia	87.50~108.00MHz	50kHz	25kHz	10.7MHz

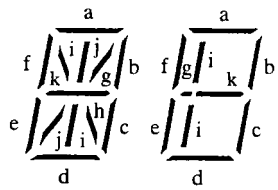
X:Don't care

AM10K

AM10K	Region	Frequency range	Channel space	Reference frequency	IF frequency
0	Europer	522~1611kHz	9kHz	9kHz	450kHz
1	U.S.A.	530~1710kHz	10kHz	10kHz	450kHz
0	Saudi Arabia	531~1602kHz	9kHz	9kHz	450kHz

Q702 10-BT-61GK(Fluorescent Indicator Tube)





	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1
Sa	A	VIDEO	a	a	a	a	a	a	a	a
Sb	B	VCR	b	b	b	b	b	b	b	b
Sc	AUDIO MUT	VDP	c	c	c	c	c	c	c	c
Sd	STEREO	TAPE-2MONI	d	d	d	d	d	d	d	d
Se	II(LEVEL1)	SIMULATED	e	e	e	e	e	e	e	e
Sf	II(LEVEL2)	STEREO IM.	f	f	f	f	f	f	f	f
Sg	II(LEVEL3)		g	g	g	g	g	g	g	g
Sh	II(LEVEL4)				h	h				
Si	FM MUTE		i	i	i	i		i		
Sj	ON		j						MEMORY	
Sk	OFF		AM				kHz	k	SLEEP	CH
Sl	SIGNAL	INPUT SEL.	FM				MHz	CLASS	PRESET	MIN

ADJUSTMENT PROCEDURES

Preparation

- **Input**

FM mono: 1kHz, 75kHz devi., 60dB/μV
FM stereo: 1kHz, L+R 67.5kHz devi.: Pilot signal 19kHz 7.5kHz devi.
AM: 400Hz, 30% mod.,

- **Output**

Connect the non-inductive type resistor of 8 ohms to the speaker terminal A of left and right channels unless otherwise noted.

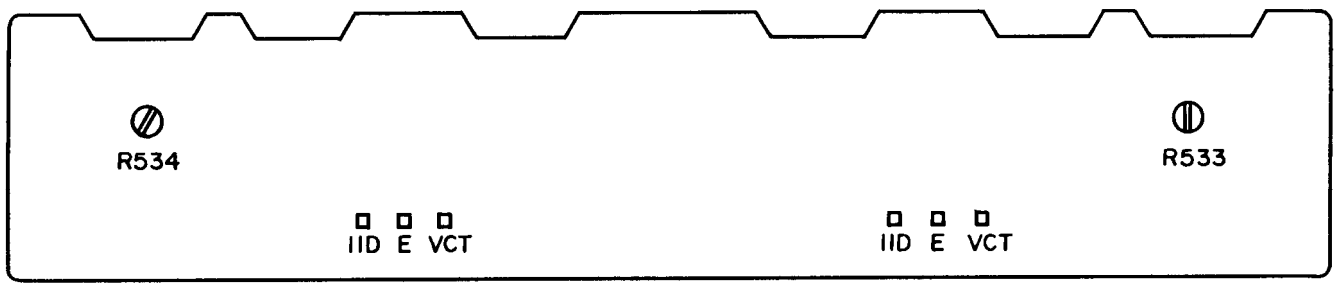
- **Standard knob position**

TAPE MONITOR . . . . . SOURCE
VOLUME . . . . . Maximum
BASS/TREBLE/BALANCE . . . . . Center
VCR 2 MODE. . . . . STEREO
SPEAKER . . . . . A
SIMULATED STEREO . . . . . OFF
SELECTIVE TONE CONTROL . . . . . OFF

Amplifier section

1. Idling current adjustment

Connect the DC voltmeter to the terminals I_{ID} and V_{CT} on the power amplifier pc board.
Adjust the semi-fixed resistors R533 and R534 so that the indication of voltmeter is 7.5 ± 1.5mV.
Notes: VOLUME . . . . . .Maximum, Open load, No input
Adjust after switching on for 5 minutes.



FM section

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Turning dial setting	Output indicator	Adjustment	Adjust for	Remarks
FM IF	1	Fig. 1	99.1MHz 1kHz, 75kHz devi. 65dBf (60dB)	–	99.1MHz	DC voltmeter	L101	0V ± 20mV	Mode switch: MONO Repeat the steps 1 and 2 until no further adjustment is necessary
	2					Distortion analyzer	L102	Minimum	
VCO		Fig. 2	99.1MHz 1kHz, 75kHz devi. 65dBf (60dB)	–	99.1MHz	Frequency counter	R201	19kHz ± 10Hz	
Stereo Distortion		Fig. 3	99.1MHz 65dBf (60dB) Ext. modulation	L or Rch. 1kHz	99.1MHz	Distortion analyzer	IF on the front end	Minimum	Mode switch: STEREO Don't turn more than ±180°
Stereo Separation	1	Fig. 3	99.1MHz 65dBf (60dB) Ext. modulation	Lch. 1kHz	99.1MHz	Rch. AC voltmeter	R202	Minimum	Maximum and same separation
	2			Rch. 1kHz		Lch. AC voltmeter		Minimum	
Muting level		Fig. 3	99.1MHz 17.2dBf (12dB) 1kHz, 75kHz devi.	–	99.1MHz	AUTO indicator	R101	Light on	
Signal level		Fig. 3	99.1MHz 35.2dBf (30dB) 1kHz 75kHz devi.	–	99.1MHz	4th indicator of signal strength	R102	Light on	

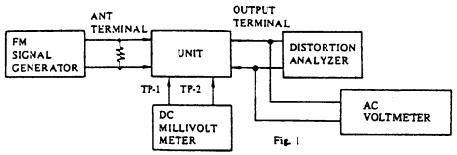
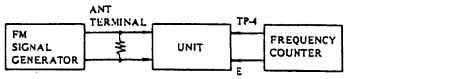


Fig. 1



Use the high impedance probe. (10:1)
Fig. 2

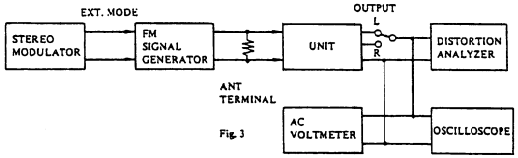
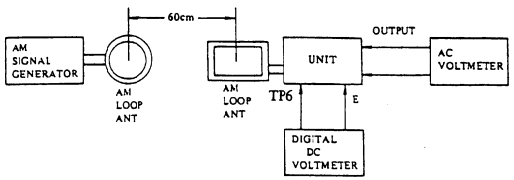


Fig. 3

AM section

Step	AM SG output	Tuned frequency	Output indicator	Adjustment point	Adjust for
1		530kHz [522kHz] (531kHz)	Digital DC voltmeter	OSC on RF block L151	1.3V ± 0.1V
2	600kHz(603kHz) 400Hz 30% mod. 60dB/m	600kHz (603kHz)	AC voltmeter	RF on RF block L151	Maximum
3	990kHz 400Hz 30% mod. 60dB/m	990kHz	AC voltmeter	L152	Maximum



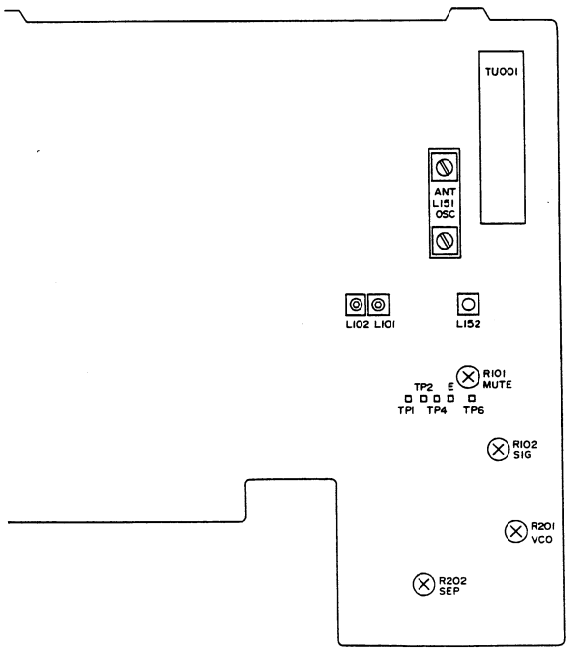
[ ] : 10kHz step model
( ) : W model
( ) : 9kHz step model

Reference specifications

FM Tuned voltage
87.9MHz 1.6 ± 0.5V
107.9MHz 7.9 ± 0.5V
(120V model)
87.5MHz 1.6 ± 0.5V
108.0MHz 7.9 ± 0.5V
(Other models)

Auto stop level
AM: Less than 66dB/m
FM: Less than 19dBμ

AM Tuned voltage
530kHz 1.3 ± 0.5V
1710kHz 7.2 ± 0.5V
(120V model)
522kHz 1.2 ± 0.5V
1611kHz 7.0 ± 0.5V
(220V/240V models)
531kHz 1.2 ± 0.5V
1602kHz 7.0 ± 0.5V
(Worldwide model)



PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE

PRINTED CIRCUIT BOARD PARTS LIST

DISPLAY PC BOARD(NADIS-3874-2/2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Remocon sensor	
U701	24130003	GP1U50XS
	ICs	
Q701	22240337	μPD75286CW-014
Q703	222807	μPA81C
Q704	22240341	BA6125
Q705	22240338	μPD17103CX-522
	FL tube	
Q702	212083	10-BT-61GK
	Transistors	
Q707-Q709	2213284	2SC1740S-R
Q711	221282	DTC144ES
Q712	2213710	DTA123JS
Q713	2213510	DTA114ES
Q716	221282	DTC144ES
	Lamp	
PL701	210064B	250mA, 6.3V
	Diodes	
D701-D713	223163	1SS133
D715, D716	223163	1SS133 <W>
D717	223163	1SS133 <D>
D718	223163	1SS133
D719	224450623	MTZ6.2C
D721	223163	1SS133
D722	224450623	MTZ6.2C

CIRCUIT NO.	PART NO.	DESCRIPTION
D731-D733	223163	1SS133
D737-D739	223163	1SS133
D740	224450562	MTZ5.6B
D741, D742	223163	1SS133
D746-D749	223163	1SS133
D759, D760	223163	1SS133
D761	223163	1SS133 <G>
	L.E.Ds	
D724-D726	225142	SEL2913K
D728-D730	225137CG,	SEL2413E-CG
	225137DG or	SEL2413E-DG or
	225137DY	SEL2413E-DY
D752	225141	SEL2213C
	Coil	
L701	233409K220	NCH-1284
	Ceraic oscillators	
X701	3010163	CST4.19MGW
X702	3010154	CST8.00MT
	Capacitors	
C701	3000057	0.1F, 5.5V, Super
C702, C705	375524744	0.47μF ±5%, 50V, MMT
C706	353780109	1 μF, 50V, Elect.
C707	353781009	10μF, 50V, Elect.
C708, C709	353741009	10μF, 16V, Elect.
C712	353721019	100 μF, 6.3V, Elect.
C714	353780109	1 μF, 50V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistor	
R740	49163103404	10k ×4, 1/10W, Network
	Switches	
S701	25035548	NPS-111-S510, Push
S703-S719	25035548	NPS-111-S510, Push
S721-S736	25035548	NPS-111-S510, Push
S737	25065286	NSS-22112, Slide, Band step <W>
	Holder	
	27190768	L.E.D

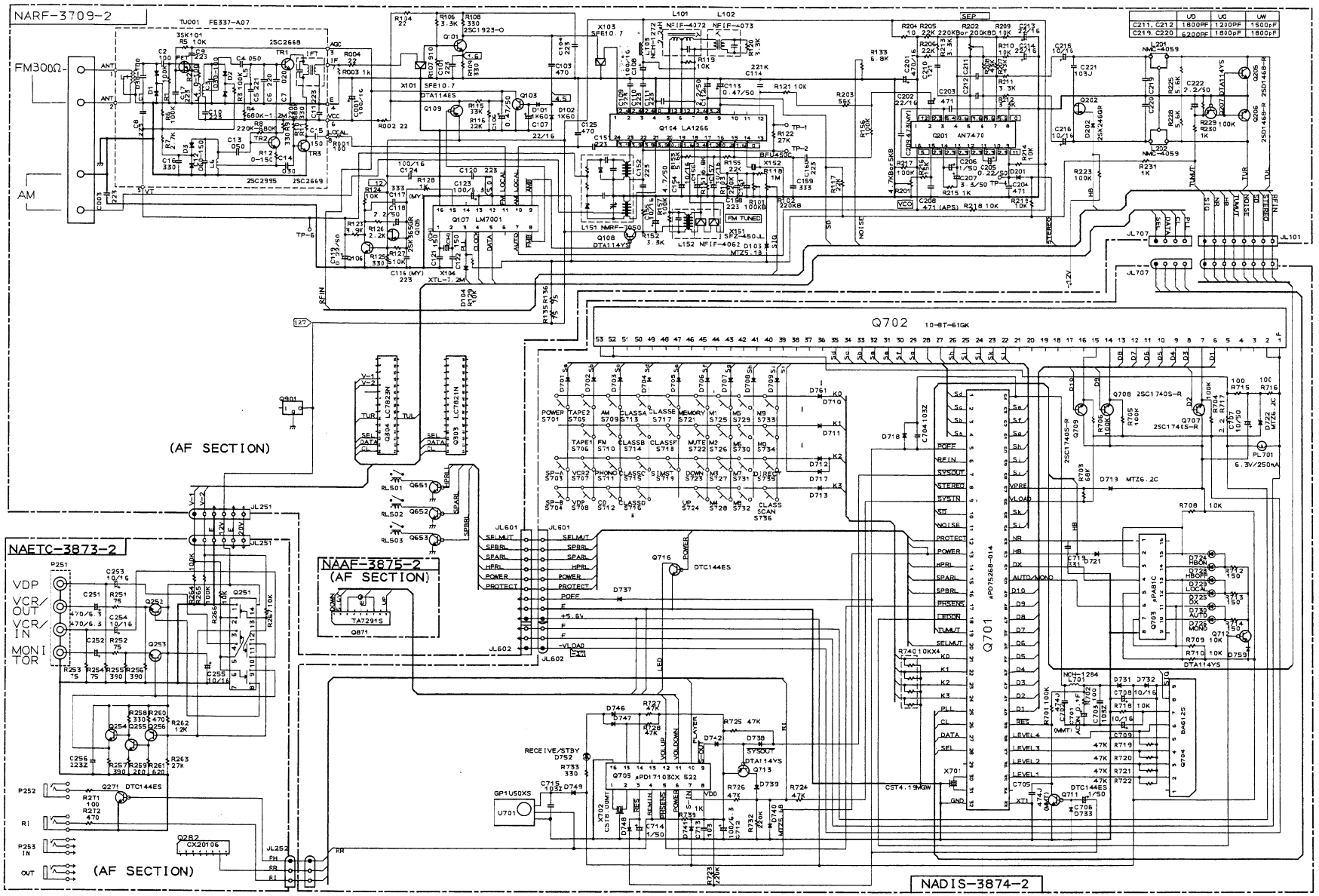
VOLUME PC BOARD(NAAF-3875-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q871	22240239	TA7291S, IC
C871	354721019	100 μF, 6.3V, Elect. capacitor
R401, R402	5142004	N16RGM50KA30F, Variable resistor <D>
R401, R402 R449, R450	5144009C	N16RGM50KA50KB30F, Variable resistor <G/W>
P401	2000809	NSAS-6P765, Socket
P403	2000624	NSAS-6P580, Socket <G/W>
P871	2000635A	NSAS-4P591, Socket
	27141059	Bracket, ground

NOTE: <D>: Only 120V model
<G>: Only 220V/240V models
<W>: Only Worldwide model

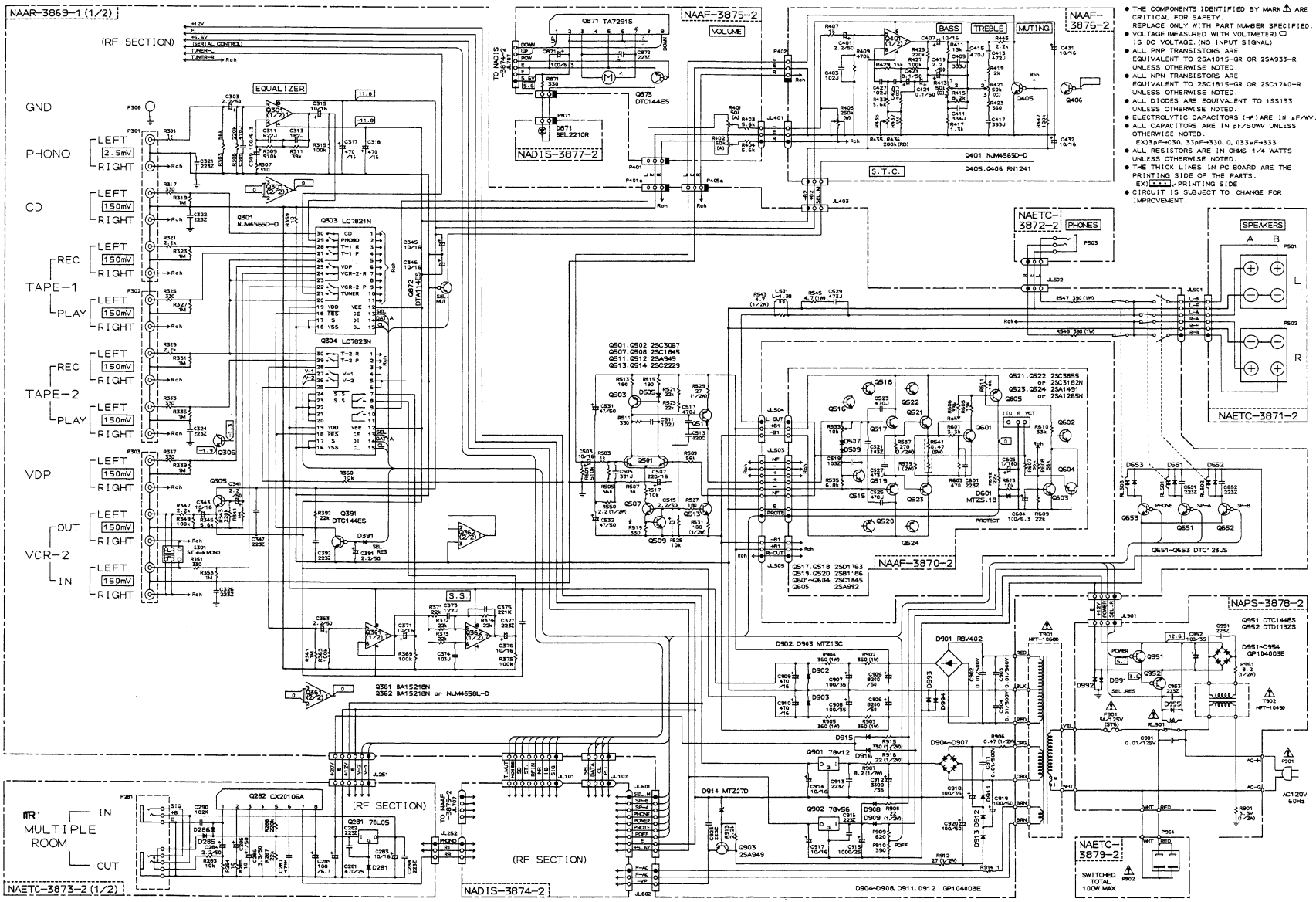
SCHEMATIC DIAGRAM

- TUNER SECTION -
120V MODEL



SCHEMATIC DIAGRAM

– AMPLIFIER SECTION –
120V MODEL



PRINTED CIRCUIT BOARD PARTS LIST

FM/AM TUNER AND SELECTOR CIRCUIT PC BOARD (NAAR-3869-2/2A/2B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Front end	
TU001	240088	FE337-A07 <D>
	240089	FE415-G11 <G/W>
	ICs	
Q104	22240039	LA1266
Q107	22240090	LM7001
Q201	22240242	AN7470
Q301	22240191	NJM4565D-D
Q303	22240280	LC7821N
Q304	22240339	LC7823N
Q361	22240247	BA15218N
Q362	22240247 or	BA15218N or
	22240293	NJM4558L-D
Q901	222780122NEC	78M12
Q902	222780565JRC	78M56
	Transistors	
Q101	2211723	2SC1923-O
Q102	2210746	2SC945A-P <G/W>
Q103, Q106	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q105	2212445	2SK365-GR
Q108, Q109	2213510	DTA114ES
Q202	2211945	2SK246-GR
Q205, Q206	2212794	2SD1468-R
Q207	2213510	DTA114ES
Q305, Q306	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q391	221282	DTC144ES
Q501, Q502	2213676 or	2SC3067-F or
	2213677	2SC3067-G
Q503, Q504	2213074 or	2SA933-R or
	2211455	2SA1015-GR
Q507, Q508	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q509, Q510	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q511, Q512	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q513, Q514	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q651-Q653	2213640	DTC123JS
Q872	2213510	DTA114ES
Q903	2211353 or	2SA949-O or
	2211354	2SA949-Y
	Diodes	
D101, D102	223132	1K60
D103	224450512	MTZ5.1B
D104	223163	1SS133
D201, D202	223163	1SS133
D391	223163	1SS133
D505, D506	223163	1SS133
D651-D653	223163	1SS133
D901	22380022	RBV402
D902, D903	224451303	MTZ13C
D904-D908	22380035	GP104003E
D909, D913	223163	1SS133
D911, D912	22380035	GP104003E
D914	224452704	MTZ27D
D915, D916	223163	1SS133
D993, D994	223163	1SS133
	Transformers	
L101	233401	NFIF-4072
L102	233402	NFIF-4073
L104	233383	NMC-6070 <G/W>
L152	232139	NMIF-4062

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L103	233409M022	NCH-1272
L201, L202	233355A	NMC-4059
L501, L502	231176	S-1.3C
	RF block	
L151	232148	NMRF-7050
	Ceramic filters	
X101, X103	3010071	SFE10.7MA5 <D>
X101-X103	3010137	SFE10.7MMK <G/W>
X151	3010123	SFZ-450JL
X152	3010076	BFU-450C
	X'tal	
X104	3010141	XTL-7.2M
	Capacitors	
C001, C108	354741019	100 μF, 16V, Elect.
C106	354784799	0.47μF, 50V, Elect.
C107	354742209	22μF, 16V, Elect.
C112	391980227	2.2 μF, 50V, Elect.(RA2)
C113	354784799	0.47μF, 50V, Elect.
C116	371122234	0.022 μF ±5%, 50V, Mylar
C117	371123334	0.033 μF ±5%, 50V, Mylar
C118	391980227	2.2 μF, 50V, Elect.(RA2)
C119	354782299	0.22μF, 50V, Elect.
C123	391921017	100 μF, 6.3V, Elect.(RA2)
C124	354741019	100 μF, 16V, Elect.
C154	354780479	4.7 μF, 50V, Elect.
C155-C157	391941007	10μF, 16V, Elect.(RA2)
C159	371123334	0.033 μF ±5%, 50V, Mylar
C160	371122234	0.022 μF ±5%, 50V, Mylar
C201	354744719	470 μF, 16V, Elect.
C202	354742209	22μF, 16V, Elect.
C205	354782299	0.22μF, 50V, Elect.
C206	354780109	1 μF, 50V, Elect.
C207	354780339	3.3 μF, 50V, Elect.
C208	370134714	470pF ±5%, 100V, APS
C209	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C211, C212	374721824	1800pF±5%, 50V, Plastic(TF) <D>
	374721224	1200pF±5%, 50V, Plastic(TF) <G>
	374721524	1500pF±5%, 50V, Plastic(TF) <W>
C213, C214	354742209	22μF, 16V, Elect.
C215, C216	391941007	10μF, 16V, Elect.(RA2)
C219, C220	374726224	6200pF±5%, 50V, Plastic(TF) <D>
	374721824	1800pF±5%, 50V, Plastic(TF) <G/W>
C221	374721034	0.01μF ±5%, 50V, Plastic(TF)
C222	391980227	2.2 μF, 50V, Elect.(RA2)
C303, C304	391980227	2.2 μF, 50V, Elect.(RA2)
C305, C306	373302214	220pF ±5%, 125V, PP <G/W>
C307, C308	373301024	1000pF±5%, 125V, PP <G/W>
C309, C310	391921017	100 μF, 6.3V, Elect.(RA2)
C311, C312	374726224	6200pF±5%, 50V, Plastic(TF)
C313, C314	374721824	1800pF±5%, 50V, Plastic(TF)
C315, C316	391941007	10μF, 16V, Elect.(RA2)
C317, C318	354744719	470 μF, 16V, Elect.
C331, C332	373301014	100pF ±5%, 125V, PP <G/W>
C341, C342	391980227	2.2 μF, 50V, Elect.(RA2)
C343-C346	391941007	10μF, 16V, Elect.(RA2)
C363, C364	391980227	2.2 μF, 50V, Elect.(RA2)
C371, C372	391941007	10μF, 16V, Elect.(RA2)
C373	374721224	1200pF±5%, 50V, Plastic(TF)
C374	374721034	0.01μF ±5%, 50V, Plastic(TF)

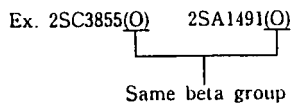
CIRCUIT NO.	PART NO.	DESCRIPTION
C376	391941007	10μF, 16V, Elect.(RA2)
C377	374724734	0.047 μF ±5%, 50V, Plastic(TF) <G>
C391	391980227	2.2 μF, 50V, Elect.(RA2)
C503, C504	391941007	10μF, 16V, Elect.(RA2)
C505, C506	373303314	330pF ±5%, 125V, PP
C507, C508	354742219	220 μF, 16V, Elect.
C515, C516	391980227	2.2 μF, 50V, Elect.(RA2)
C529, C530	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C531, C532	354784709	47μF, 50V, Elect.
C533, C534	373301014	100pF ±5%, 125V, PP <G/W>
C651, C652	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C905, C906	3504225	8200μF, 50V, Elect. <D>
	3504239	8200μF, 50V, Elect. <G/W>
C907, C908	354761019	100 μF, 35V, Elect.
C909, C910	354744719	470 μF, 16V, Elect.
C912	354763329	3300μF, 35V, Elect.
C914	391941007	10μF, 16V, Elect.(RA2) <D/W>
	354744719	470 μF, 16V, Elect.<G>
C915	354751029	1000μF, 25V, Elect.
C917	391941007	10μF, 16V, Elect.(RA2) <D/W>
	354724719	470 μF, 6.3V, Elect.<G>
C918	354761019	100 μF, 35V, Elect.
C919, C920	354781019	100 μF, 50V, Elect.
C922	354780339	3.3 μF, 50V, Elect. <G>
C924	354754719	470 μF, 25V, Elect.
	Resistors	
R101	5210221 or	N06HR100KBD
	5210070	Semi-fixed
R102, R202	5210072 or	N06HR220KBD or
	5210222	N06HR200KBD, Semi-fixed
R201	5210216 or	N06HR5KBD or
	5210062	N06HR4.7KBD, Semi-fixed
R529, R530	442522704	27ohm, 1/2W, Metal oxide film
R531, R532	442521014	100ohm, 1/2W, Metal oxide film
R543, R544	442520474	4.7ohm, 1/2W, Metal oxide film
R545, R546	441620474	4.7ohm, 1W, Metal oxide film
R547, R548	441623914	390ohm, 1W, Metal oxide film
R550	442520224	2.2ohm, 1/2W, Metal oxide film
R902-R905	441623614	360ohm, 1W, Metal oxide film
R906	442524794	0.47ohm, 1/2W, Metal oxide film
R907	442520824	8.2ohm, 1/2W, Metal oxide film
R908	442522204	22ohm, 1/2W, Metal oxide film
R912	442522704	27ohm, 1/2W, Metal oxide film
R915	442523314	330ohm, 1/2W, Metal oxide film
R916	442522204	22ohm, 1/2W, Metal oxide film
	Switch	
S301	25065286	NSS-22112, Slide, VCR-2
	Relaies	
RL501, RL502	25065339	NRL-2P5A-DC24-046, Speaker
RL503	25065342	NRL-2P1.25A-DC24-048, Headphone
	Terminals	
P101	25060085	NTM-4PDMN29, Antenna <D>
	25060087	NTM-2PDMN31, Antenna <G/W>
P301	25045252	NPJ-6PDBL124
P302, P303	25045213	NPJ-6PDBL92
	Plugs	
P401a, P405a	25055133	NPLG-3P117
	Sockets	
JL101	25050272	NSCT-8P100
JL102	25050268	NSCT-4P96
JL403, JL602	25050267	NSCT-3P95
JL601	25050273	NSCT-9P101

CIRCUIT NO.	PART NO.	DESCRIPTION
	Radiators	
Q901a	27160209	For Q901 and Q902
D901a	27160166	For D901
	Screws	
	82143006	3P+6FN(BC), For Q901a
	82143010	3P+10FN(BC), For D901a
	Bracket	
	27141059	Ground

POWER AMPLIFIER PC BOARD(NAAF-3870-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q515, Q516	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q517, Q518	2201944 or	2SD1763-D or
	2201945	2SD1763-E
Q519, Q520	2201934 or	2SB1186-D or
	2201935	2SB1186-E
Q521, Q522	☆2201703,	2SC3855-O,
	☆2201704,	2SC3855-Y,
	☆2201706,	2SC3855-P,
	☆2202292 or	2SC3182N-R or
	☆2202293	2SC3182N-O
Q523, Q524	☆2201693,	2SA1491-O,
	☆2201694,	2SA1491-Y,
	☆2201696,	2SA1491-P,
	☆2202282 or	2SA1265N-R or
	☆2202283	2SA1265N-O
Q601-Q604	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q605	2211792 or	2SA992-F or
	2211793	2SA992-E
	Diodes	
D507-D510	223163	1SS133
D601	224450512	MTZ5.1B
	Capacitors	
C519-C522	374721034	0.01μF ±5%, 50V, Plastic(TF) <G/W>
C527, C528	373734734	0.047 μF ±5%, 100V, MKT
C604	354721019	100 μF, 6.3V, Elect.
C605	354780109	1 μF, 50V, Elect.
	Resistors	
R533, R534	5215045	N08HR10KBC, Semi-fixed
R537, R538	442522714	270ohm, 1/2W, Metal oxide film
R539, R540	441720104	1ohm, 2W, Metal oxide film
R541, R542	4500033	0.47ohm, 5W, Metal plate

CAUTION: Replacement for transistor of mark ☆,if necessary, must be made from the same beta group (H_{FE}) as the original type.



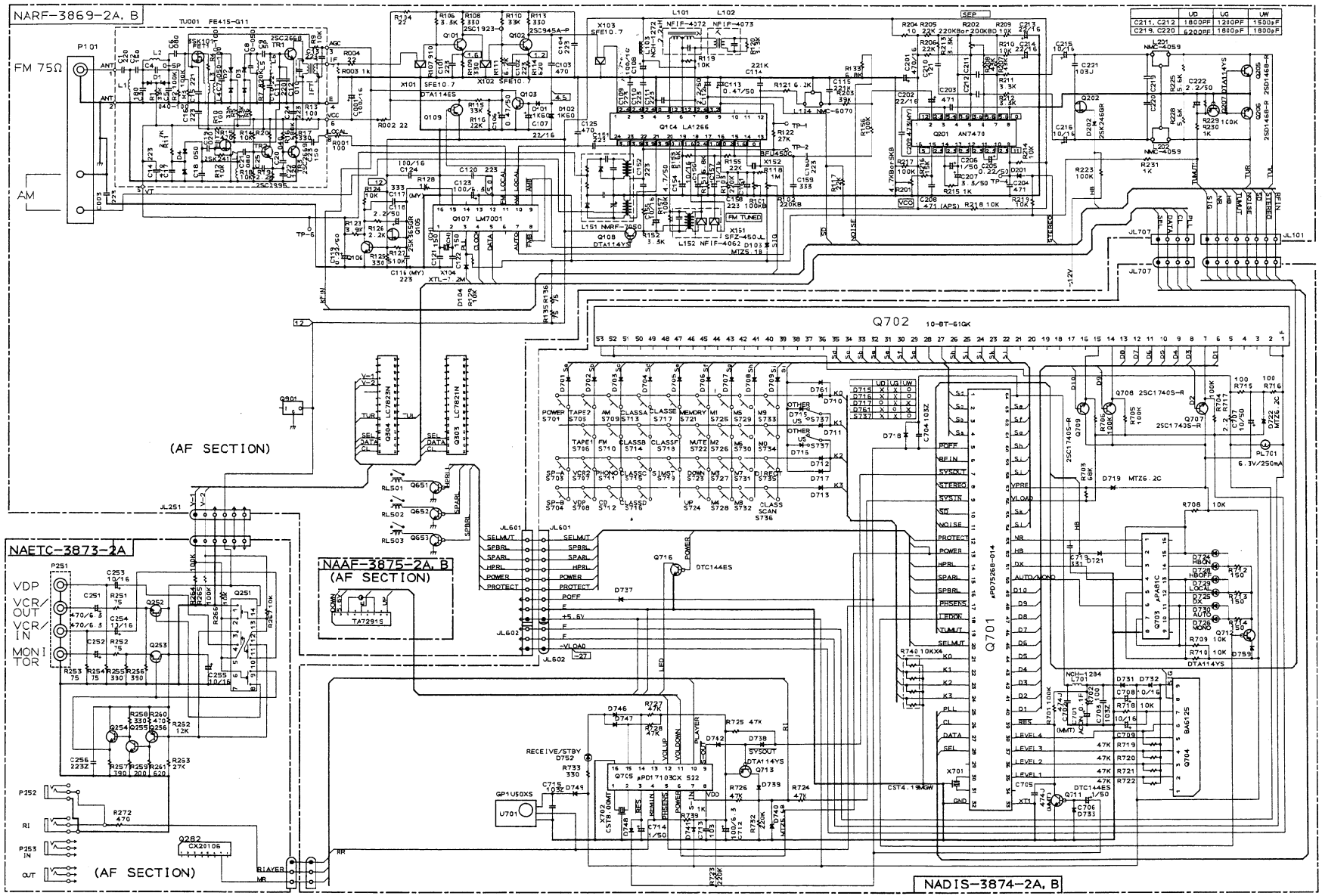
NOTE: <D>: Only 120V model
<G>: Only 220V/240V models
<W>: Only Worldwide model

SCHEMATIC DIAGRAM

A B C D E F G

1 2 3 4 5

– TUNER SECTION –
OTHER MODELS

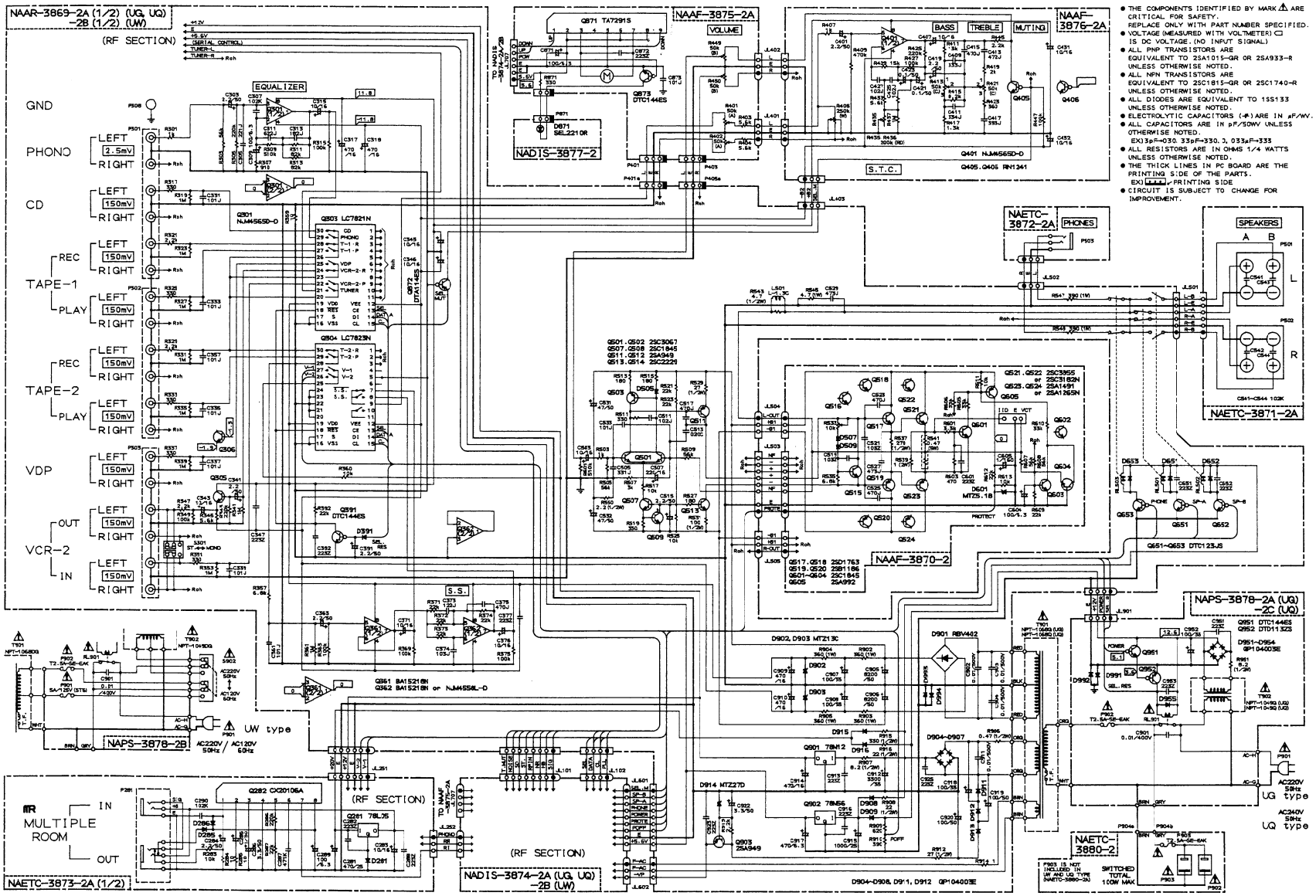


SCHEMATIC DIAGRAM

A B C D E F G

1 2 3 4 5

– AMPLIFIER SECTION –
OTHER MODELS



PRINTED CIRCUIT BOARD PARTS LIST

SPEAKER TERMINAL PC BOARD (NAETC-3871-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTION
P501, P502	25060110	NTM-4PDMN44, Speaker terminals

HEADPHONE TERMINAL PC BOARD (NAETC-3872-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTUON
P503	25045256	YKB21-5010, Headphone terminal <D/W>
	25045255	YKB21-5009, Headphone terminal <G>

VIDEO TERMINAL PC BOARD (NAETC-3873-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q251	222840661	4066B
Q281	222780053	78L05
Q282	22240345	CX20106A
	Transistors	
Q252-Q255	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q256	2213074 or	2SA933-R or
	2211455	2SA1015-GR
Q271	221282	DTC144ES <D>
	Diodes	
D281, D285	223163	1SS133
	Capacitors	
C251, C252	354724719	470 μF, 6.3V, Elect.
C253-C255	391941007	10μF, 16V, Elect.(RA2)
C283	391941007	10μF, 16V, Elect.(RA2)
C284	391980227	2.2 μF, 50V, Elect.(RA2)
C285	354780109	1 μF, 50V, Elect.
C286	354780339	3.3 μF, 50V, Elect.
C289	391921017	100 μF, 6.3V, Elect.(RA2)
	Terminals	
P251	25045192	NPJ-4PDBL76, Video
P271	25045172	HSJ-1003-01-020, RI
P281	25045293	HSJ-1003-01-012, RR (Room to Room)
P491	25045171	NPJ-4PDBL65, PRE-MAIN <D>
	Sockets	
J1.252	25050267	NSCT-3P95
P404	2000562	NSAS-6P518 <D>
	Plug	
P402a	25055133	NPLG-3P117 <D>
	Shield plate	
	27150294	<D>

AC OUTLET TERMINAL PC BOARD(NAETC-3879-2) (Only 120V model)

CIRCUIT NO.	PART NO.	DESCRIPTION
P902	25050409	⚠ NSCT-4P234, AC outlet
P904	2009990078	NSAS-4P0115, Socket

AC OUTLET TERMINAL PC BOARD(NAETC-3880-2/2A) (Only 220V and Worldwide models)

CIRCUIT NO.	PART NO.	DESCRIPTION
P902, P903	25050410	⚠ NSCT-2P235, AC outlet
F903a	25050065	⚠ YSH-403T, Fuseholders <G>
F903	252075	⚠ 2.5A-SE-EAK, Primary for AC outlet <G>
P904a	2065543341	Cord ass'y
P904b	2065543348	Cord ass'y

PREAMPLIFIER PC BOARD(NAAF-3876-2/2A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q401	22240191	NJM4565D-D
	Transistors	
Q405, Q406	2213631 or	RN1241-A or
	2213632	RN1241-B
	Capacitors	
C401, C402	391980227	2.2 μF, 50V, Elect.(RA2)
C407, C408	391941007	10μF, 16V, Elect.(RA2)
C409, C410	374723334	0.033 μF ±5%, 50V, Plastic(TF)
C411, C412	374723344	0.33μF ±5%, 50V, Plastic(TF)
C413, C414	374724724	4700pF±5%, 50V, Plastic(TF)
C417, C418	374723934	0.039 μF ±5%, 50V, Plastic(TF)
C419, C420	391980227	2.2 μF, 50V, Elect.(RA2)
C421-C424	354781099	0.1 μF, 50V, Elect.
C425-C428	374721024	1000pF±5%, 50V, Plastic(TF)
C431, C432	354741009	10μF, 16V, Elect. <D>
	354744709	47μF, 16V, Elect. <G/W>
	Resistors	
R405	5104270	N11RHC250KWT25Z, Variable, BALANCE
R413, R414	5104269	N14RHC50KC25Z, Variable, BASS
R421, R422	5104269	N14RHC50KC25Z, Variable, TREBLE
R435, R436	6182006	N25LGL200KRD10Z, Slide, S.T.C.
	Socket	
P402	2000624	NSAS-6P580 <D>

VOLUME INDICATOR PC BOARD (NADIS-3877-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
D871	225241 or	SEL2210R-C or
	225242	SEL2210R-D, L.E.D.
	27190545	Holder, LED

NOTE: <D>:Only 120V model
<G>:Only 220/240V models
<W>:Only Worldwide model

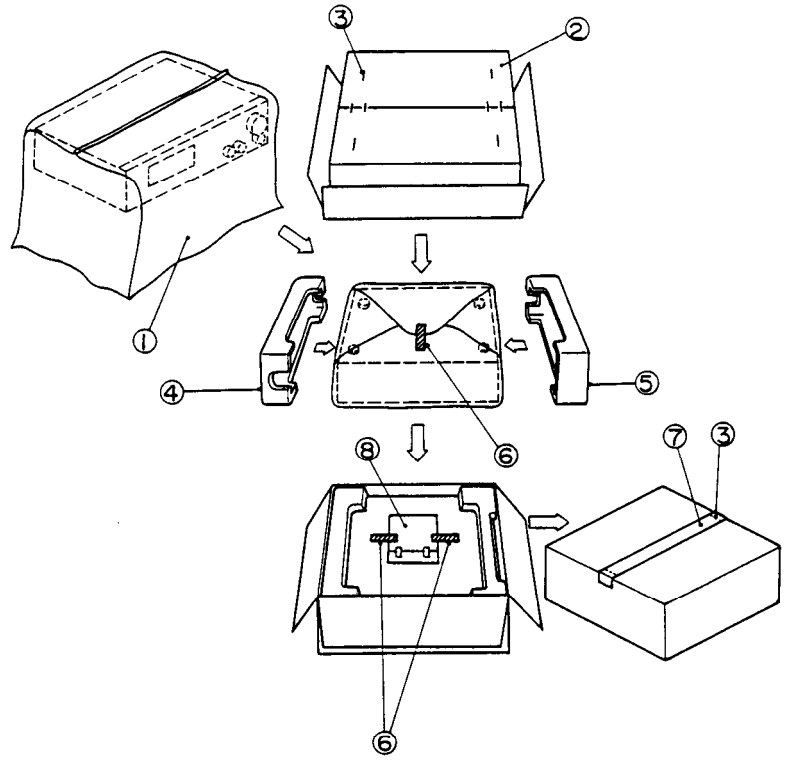
POWER SUPPLY PC BOARD (NAPS-3878-2/2A/2B/2C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q951	221282	DTC144ES
Q952	2213650	DTD113ZS
	Diodes	
D951-D954	22380035	GP104003E
D955	223163	1SS133
D991, D992	223163	1SS133
	Transformer	
T902	2300493	⚠ NPT-1049D, Power <D>
	2300494	⚠ NPT-1049G, Power <G>
	2300495	⚠ NPT-1049DG, Power <W>
	2300496	⚠ NPT-1049Q, Power <Q>
	Capacitors	
C901	3500065A	⚠ DE7150FZ103PAC400V/125V, IS
C952	354761019	100 μF, 35V, Elect.
	Resistors	
R901	431523355	⚠ 3.3Mohm, 1/2W, Solid <D>
R951	442520824	8.2ohm, 1/2W, Metal oxide film
	Relay	
RL901	25065269	⚠ NRL-1P5A-DC12-36 <D>
	25065248	⚠ NRL-1P15A-DC12-29 <G/W/Q>
	Socket	
JL901	25050268	NSCT-4P96
	Fuseholders	
F901a	250113	⚠ SN5051 <D/W>
F902a	25050065	⚠ YSH403T <G/W/Q>
	Fuse	
F901	252050	⚠ 5A(ST-6), Primary <D/W>
F902	252075	⚠ 2.5A-SE-EAK, Primary <G/W/Q>
	Bracket	
	27141059	Ground <D>
	Label	
	29360626-1	Fuse <D>

NOTE:<D>:Only 120V model
<G>:Only 220V model
<Q>:Only 240V model
<W>:Only Worldwide model

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.REPLACE ONLY WITH PART NUMBER SPECIFIED.

PACKING VIEW



REF. NO.	PART NO.	DESCRIPTION
1	29100034	850 ×650mm, Poly-vinyl bag
2	29052062	Master carton box
3	282320	Sealing hook
4	29091263A	Pad R
5	29091262C	Pad L
6	261504	Adhesive tape
7	29110071-1	Damplon tape
8	Accessary bag ass'y	
	-120V model-	
	29341515A	Instruction manual
	292064B	FM antenna
	232140	NMA-3057, AM loop antenna
	2010200	Connection cord for RI
	3010054	UM-3, Two batteries
	24140170	RC-170S, Remote control transmitter
	29100097	250 ×350mm, Poly-vinyl bag
	29365019	Warranty card (U.S.A. model)
	29358002H	Service station list (U.S.A. model)

REF. NO.	PART NO.	DESCRIPTION
	-220V/240V models-	
	29341516	Instruction manual
	292092	FM antenna
	232140	NMA-3057, AM loop antenna
	2010200	Connection cord for RI
	3010124	UM-4, Two batteries
	24140171	RC-171S, Remote control transmitter
	29100097	250 ×350mm, Poly-vinyl bag
	25060123	FM adaptor (240V model)
	-Worldwide model-	
	29341516	Instruction manual
	292092	FM antenna
	232140	NMA-3057, AM loop antenna
	2010200	Connection cord for RI
	3010124	UM-4, Two batteries
	24140171	RC-171S, Remote control transmitter
	29100097	250 ×350mm, Poly-vinyl bag
	25060123	FM adaptor
	25055040	CV-K-2, Conversion plug

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